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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,818	06/22/2006	Kazumasa Kamachi	2005_1535A	3974

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WASHINGTON, DC 20006-1021

EXAMINER

PRINCE, FRED G

ART UNIT	PAPER NUMBER
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1724

MAIL DATE	DELIVERY MODE
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09/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,818	Applicant(s) KAMACHI ET AL.	
	Examiner Fred Prince	Art Unit 1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6,7 and 12 is/are rejected.
- 7) ☒ Claim(s) 8-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>0905,0106</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Mizutani et al. (JP 2002-292377).

Mizutani et al. teach adding an oxidizing agent (5) in the form of ozone to the organic wastewater inherently oxidizing the sulfur compound contained therein to molecular sulfur; subjecting the organic wastewater after said oxidizing step to an anaerobic treatment for the methane fermentation (7) thereof; and controlling the feeding rate of the oxidizing agent to be added to the wastewater using as an indicator the concentration of the residual oxidizing agent in the water flowing into said anaerobic treatment step and/or the concentration of hydrogen sulfide in a biogas generated ([0017]).

Claim Rejections - 35 USC § 103

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (JP 2002-292377).

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Mizutani et al. disclose an oxidation reactor (3) in which an oxidizing agent is added to the organic wastewater and is reacted therewith; and a methane fermentation reactor (7) in which the waste water subjected to the oxidation treatment is subjected to a methane fermentation treatment.

Mizutani et al. do not disclose said methane fermentation reactor being provided with: at least one of means for measuring the concentration of the residual oxidizing agent in the water flowing into said methane fermentation reactor and means for measuring the concentration of hydrogen sulfide in a gas generated in said methane fermentation reactor; and control means for controlling the feeding rate of the oxidizing agent to be added on the basis of the measured value.

In any case, Trocciola et al. disclose the well known concept of providing at least one of means for measuring the concentration of hydrogen sulfide (26) in a gas generated in said methane fermentation reactor; and control means (C) for controlling the feeding rate of an oxidizing agent (6) to be added on the basis of the measured value in order to, for example, minimize the amount of hydrogen sulfide in the gas.

Accordingly, it would have been readily obvious for the skilled artisan to modify the apparatus of Mizutani et al. such that it includes providing at least one of means for measuring the concentration of hydrogen sulfide (26) in a gas generated in said methane fermentation reactor; and control means (C) for controlling the feeding rate of an oxidizing agent (6) to be added on the basis of the measured value in order to, for example, minimize the amount of hydrogen sulfide in the gas.

Allowable Subject Matter

4. Claims 8-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: While claims 6-7 are not allowable for the reasons provided above, in the examiner's opinion, the prior art fails to teach or render obvious the method further including the steps of any of claims 8-11.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References are cited of interest to show the state of art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Prince whose telephone number is (571) 272-1165. The examiner can normally be reached on Monday-Thursday, 6:30-4:00; alt. Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Fred Prince
Primary Examiner
Art Unit 1724

fgp
9/17/07